PROCEEDINGS OF THE BIOLOGICAL SOCIETY OF WASHINGTON
112(1):141–144. 1999.

Deilocerus captabilis, a new species of cyclodorippid crab from southeastern Brazil (Crustacea: Decapoda: Brachyura: Cyclodorippidae)

Marcos Tavares

Universidade Santa Úrsula, ICBA, Rio de Janeiro 22231-040, Brasil

Abstract.—*Deilocerus captabilis,* new species, the third western Atlantic species and seventh representative of the genus is herein described based on an adult female collected on calcareous algae nodules from 50 m depth, southeastern Brazil. *Deilocerus captabilis,* new species, is the only species in the genus with three teeth on the lateral margin of the carapace.

Resumo.—*Deilocerus captabilis* nova espécie, terceira a ocorrer no Atlântico sul ocidental das sete conhecidas para o gênero, é descrita e ilustratada. A nova espécie é baseada em uma fêmea adulta coligida a 50 m de profundidade em fundos de nódulos de algas calcáreas. A nova espécie se distingue facilmente das demais espécies do gênero por ser a única a apresentar três dentes na margem lateral da carapaça.

As part of an ongoing project (REVIZEE) of the Brazilian government's department "Ministério do Meio Ambiente" to evaluate the country's marine living resources, a biological survey of the continental shelf and slope from Salvador (12°S) to Cabo de São Tomé (23°S) was conducted in 1997 onboard the "Astro Garoupa".

The samples yielded an adult female of a new species of cyclodorippid crab, *Deilocerus captabilis,* described herein.

The holotype is deposited in the Museu Nacional, Rio de Janeiro (MNRJ). Descriptive terminology follows Tavares (1991, 1996). Abbreviations: Mxp1–3, first to third maxillipeds; P2–P5, second to fifth pereopods, P1, cheliped; cl, carapace length; cw, carapace width; mm, millimeters.

Deilocerus captabilis, new species
Fig. 1

Material examined.—Brazil: Espírito Santo. "Astro Garoupa", REVIZEE Central II, st. 34C, 3 Nov 1997, 20°24′S, 39°49′W, 50 m: female holotype cl 1.7 mm, cw 2.0 mm (MNRJ 7303).

Type locality.—Brazil: Espírito Santo (20°24′S, 39°49′W, 50 m).

Description.—Carapace slightly broader than long. Dorsal surface ornamented with very fine scattered granules, denser near margins, except on smooth, shallow grooves defining gastric regions. Ventrolateral surfaces of carapace almost smooth; subhepatic region densely covered with rounded coarse granules, coarser on dorsal surface. Frontolateral tooth rounded, densely covered with small granules; exorbital tooth blunt. Hepatic and anterolateral teeth short, blunt, covered with rounded granules; anterolateral tooth smallest. Laterobranchial tooth present as low lobe. Anterolateral margin (from exorbital tooth to branchial tooth) rounded, about as long as posterolateral margin (measured from branchial tooth to posterior margin). Posterolateral margin straight, well defined by row of small granules.

Ocular peduncle covered with small rounded tubercles, anterodistal tubercles more acute; cornea pigmented. Antenna very small, hidden in dorsal view; articles

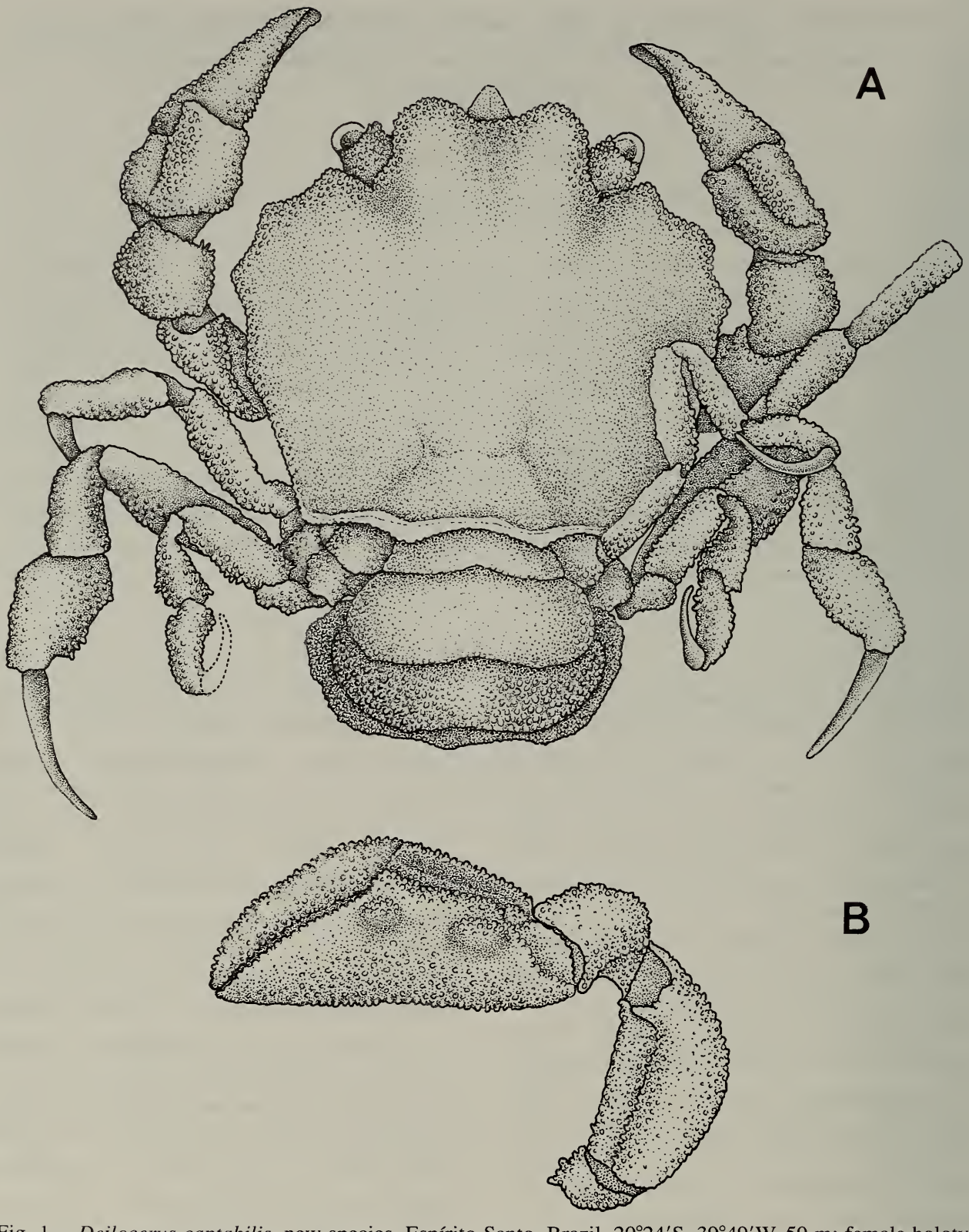

Fig. 1. *Deilocerus captabilis,* new species, Espírito Santo, Brazil, 20°24′S, 39°49′W, 50 m: female holotype cl 1.7, cw 2.0 mm (MNRJ 7303). A, dorsal view of whole crab. B, right cheliped outer view.

1–4 ornamented with small granules; second article slightly flattened; fifth article almost smooth; flagellum obsolete.

Endostomial channel visible dorsally between frontolateral teeth. Third maxilliped with ischium and merus, each more than 2 times as long as broad, with outer surfaces covered with rounded granules; palp without granules, articulated on inner surface of merus.

Chelipeds densely covered with small tubercles, much less dense and smaller on in-

ner surfaces; inner surfaces of merus, carpus and chela forming concave surface fitting closely against walls of carapace; dorsal and ventral margins of merus, carpus, palm and fingers well defined. Fingers terminating in sharp tips, cutting edge with few small acute teeth. Dactyl smaller than palm, set obliquely relative to palm axis. Fixed finger about 2 times broader proximally than distally. Palm about 2 times longer than broad, ornamented longitudinally with 2 rounded protuberances, proximal one largest.

P2 longer than P3, otherwise similar. P2 and P3 laterally flattened; both legs with propodus, carpus, and merus densely ornamented with tubercles on dorsal and ventral margins, flanks almost smooth; dactyl cylindrical, with minute granules.

P4 and P5 generally similar, subdorsal, subcheliform, much smaller than P2 and P3; P4 with ischium about 3 times longer than in P5; dactylus and propodus short, strongly curved; propodus twisted, dactylus flexing on its lateral surface. Ornamentation on propodi, carpi and meri less pronounced on P4–5 than on P2–3.

Female abdomen with 6 segments densely covered with small tubercles diminishing in size and density from pleotelson to first segment. Pleotelson as wide as fifth segment, lateral margins broadly rounded.

Distribution.—Known only from the type-locality Espírito Santo, Brazil (20°24′S, 39°49′W, 50 m).

Etymology.—The specific name, *captabilis* (Latin, that can take), refers to the subcheliform P4 and P5.

Remarks.—The genus *Deilocerus* Tavares, 1993, is strictly American in distribution. The genus is represented in the western Atlantic by two species, and in the eastern Pacific by four (Tavares 1993, 1996). Two groups of species are recognizable. The first group includes species with only one anterolateral tooth on the margin of the carapace: *D. perpusillus* (Rathbun, 1900) and *D. analogus* (Coelho, 1973), from the western Atlantic, and *D. laminatus* (Rathbun, 1935) from the eastern Pacific. The second group is found only in the eastern Pacific and encompasses species with two teeth (one hepatic and one anterolateral), along the margin of the carapace: *D. planus* (Rathbun, 1900), *D. decorus* (Rathbun, 1933) and *D. hendrickxi* Tavares, 1993. *Deilocerus captabilis,* new species, falls into the second group and is, therefore, the first western Atlantic representative of that group. *Deilocerus captabilis,* new species is, so far, the only species in the genus with three teeth on the lateral margin of the carapace (hepatic, anterolateral, and laterobranchial): the first two teeth being well developed, and the laterobranchial represented by a low lobe. *Deilocerus captabilis,* new species, can also be readily recognized from the remaining six species of the genus by the shape and ornamentation of the frontoorbital margin of the carapace.

Although no carrying behavior (Guinot et al. 1995) has been observed in *Deilocerus captabilis,* new species, it is possible that the crab can hold an object over its carapace using the last two pairs of legs. P4 and P5 are subchelate, with the propodus and especially the dactyl strongly curved; the propodus is twisted so the dactyl closes on the lateral surface of the propodus. This structure allows a small object, such as a piece of shell, to be held over the carapace. Carrying behavior has been observed in other species of the genus, such as *D. laminatus* (see Garth 1946, Tavares 1994) and *D. planus* (see Schmitt 1921, Wicksten 1982).

Acknowledgments

I am grateful to Danièle Guinot (Muséum national d'Histoire naturelle, Paris), Rafael Lemaitre (Smithsonian Institution, Washington, D.C.) and Peter K. L. Ng (National University of Singapore) for reading a draft of the manuscript and providing helpful suggestions, and to Maria Helena Pinheiro (Universidade Santa Úrsula) for preparing drawings. This research has been funded by

Ministério do Meio Ambiente, SECIRM, Programa REVIZEE, and Universidade Santa Úrsula, Rio de Janeiro. Thanks are due also to CNPq for supporting studies on the systematic of decapod crustaceans in the form of ongoing grant 30.09.15/97–7.

Literature Cited

Coelho, P. A. 1973. Descrição preliminar de *Clythrocerus analogus,* n. sp., do litoral brasileiro (Crustacea, Decapoda, Dorippidae).—Ciência e Cultura 25(6)(suppl.):343–344.

Garth, J. S. 1946. Littoral brachyuran fauna of the Galapagos Archipelago.—Allan Hancock Pacific Expedition 5(10):i–iv + 341–600.

Guinot, D., D. Doumenc, & C. C. Chintiroglou. 1995. A review of the carrying behaviour in Brachyuran crabs, with additional information on the symbioses with sea anemones.—Raffles Bulletin of Zoology 43(2):377–416.

Rathbun. M. J. 1900. Synopses of North American invertebrates. X. The Oxyrhynchous and Oxystomatous crabs of North America.—American Naturalist 34:503–520.

———. 1933. Preliminary descriptions of nine new species of oxystomatous and allied crabs.—Proceedings of the Biological Society of Washington 46:183–186.

———. 1935. Preliminary descriptions of seven new species of oxystomatous and allied crabs.—Proceedings of the Biological Society of Washington 48:1–4.

Schmitt, W. L. 1921. The Marine Decapod Crustacea of California with special reference to the Decapod Crustacea collected by the United States bureau of Fisheries Steamer "Albatross" in connection with the Biological Survey of San Francisco Bay during the years 1912–1913.—University of California Publications in Zoology 23:1–470.

Tavares, M. 1991. Révision préliminaire du genre *Tymolus* Stimpson, avec la description de *Tymolus brucei* sp. nov. d'Australie occidentale (Crustacea, Brachyura, Cyclodorippoidea).—Bulletin du Muséum national d'Histoire naturelle, Paris (4), 13, sect. A, (3–4):439–456.

———. 1993. Crustacea Decapoda: Les Cyclodorippidae et Cymonomidae de l'Indo-Ouest-Pacifique à l'exclusion du genre *Cymonomus. In* A. Crosnier, ed., Résultats des Campagnes MUSORSTOM, 10.—Mémoires du Muséum national d'Histoire naturelle, Paris 156:253–313, Fig. 1–20.

———. 1994. Description préliminaire de quatre nouveaux genres et trois nouvelles espèces de Cyclodorippoidea américains.—Vie Milieu 43(2–3):137–144.

———. 1996. Révision systématique des Cyclodorippidae américains (Crustacea, Decapoda, Brachyura).—Bulletin du Muséum national d'Histoire naturelle, Paris (4), 18, sect. A, (1–2):233–295.

Wicksten, M. K. 1982. Behavior in *Clythrocerus planus* (Rathbun, 1900) (Brachyura, Dorippidae).—Crustaceana 43(3):306–307.